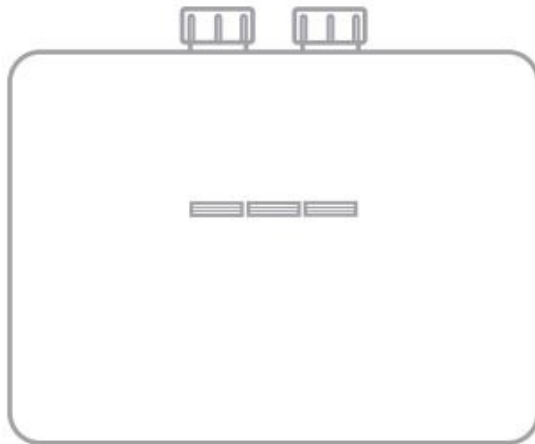




Product Instruction Manual

# Rho



**IN44T, IN60T**

Instantaneous Inline Water Heater








## Overview

Thank you for purchasing a Rho Instantaneous Inline Water Heater. Available in 4.4 and 6.0 kW models, to be used for hand washing at a single basin. Instantaneous water heaters are energy efficient as they only consume energy when in use, so have no standing losses. The IN44T and IN60T models are mains pressure with external electronic temperature control. Bare wire heating systems offer rapid heat up times and a near instant supply of hot water.

Confirm that the flow rate and temperature performance is adequate for your application using the tables provided. This appliance is intended for use with spray head taps with removable M22/ M24 nozzles. Not suitable for use with thermostatic mixing valves or taps or to supply a single lever mixer tap.

Please read and follow these instructions to ensure that installation and operation are as simple and safe as possible.

## Important Safety Points

-  This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
-  Children shall not play with the appliance.
-  Cleaning and user maintenance shall not be made by children without supervision.
-  The appliance should only be installed and maintained by a competent person in accordance with any local electrical and plumbing regulations.
-  If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
-  The appliance must be permanently connected to the electrical supply through an appropriately rated isolating switch with a separation in all poles.
-  Only connect the appliance to an electrical supply that meets the specification detailed on the rating label.



The appliance must be earthed.



Only connect this appliance to a water supply that meets the min/ max pressures specified in the specifications section of this manual.



This appliance is intended to be permanently connected to the water mains and should not be connected by a detachable hose-set.



The resistivity of the water supply must not be less than 1300  $\Omega\text{cm}$ .



This appliance should not be installed in a location where freezing can occur.



This appliance is not designed for outdoor use or use in damp environments.



Do not use a supply with incoming water temperatures greater than 48°C

# 1. Installation

## Wall Mounting



Do not locate the appliance where the consequences of a water leak could be unusually serious.



This appliance should not be installed in a location where freezing can occur.



This appliance is not designed for outdoor use or use in damp environments.



Ensure there are no hidden cables or pipework before commencing any drilling.

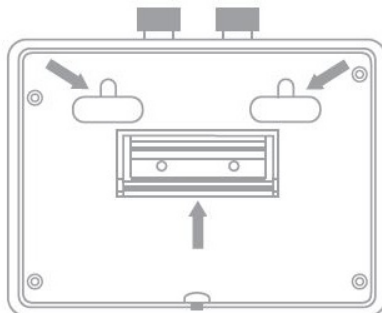
- The appliance must be mounted horizontally with the inlet and outlet connections at the top.
- Before attaching the appliance to the wall, consider the wiring route to the appliance.
- It is advised that the appliance be located as close as practical to the hot water outlet in order to avoid unnecessary heat losses through the pipework.
- It can be mounted using the bracket or the key hole slots.

### Using the bracket

- Using the supplied bracket and ensuring a level, mark the two screw holes onto the desired mounting surface. Drill holes and insert wall plugs, secure the bracket to the wall using the two screws provided. Offer up the appliance to the bracket and locate into the corresponding slot on the back (see lower arrow of diagram 1).

### Using the key hole slots

- Ensuring a horizontal level, mark two holes corresponding to the key hole slots (see upper arrows diagram 1) onto the desired mounting surface. Drill holes and insert wall plugs, followed by the two supplied screws, leaving approx. 10 mm head of each protruding. Offer up the appliance to the screws and locate into the corresponding key hole slots on the back of the appliance.



## 2. Plumbing Connection



The resistivity of the water supply must not be less than 1300  $\Omega\text{cm}$ .



Do not use a supply with incoming water temperatures greater than 48°C.



Only connect this appliance to a water supply that meets the min/ max pressures specified in the specifications section of this manual.



This appliance is intended to be permanently connected to the water mains and should not be connected by a detachable hose-set.






- The appliance is designed for use with spray head taps.
- Ensure the following criteria are met for the water supply:
  - Minimum flow = 2.5 l/m
  - Pressure min/ max = 0.1 Mpa / 0.75 Mpa
  - Water resistivity =  $\geq 1300 \Omega\text{cm}$
- Suitable for use with pre-heated water e.g. solar heating systems to a maximum of 48°C.



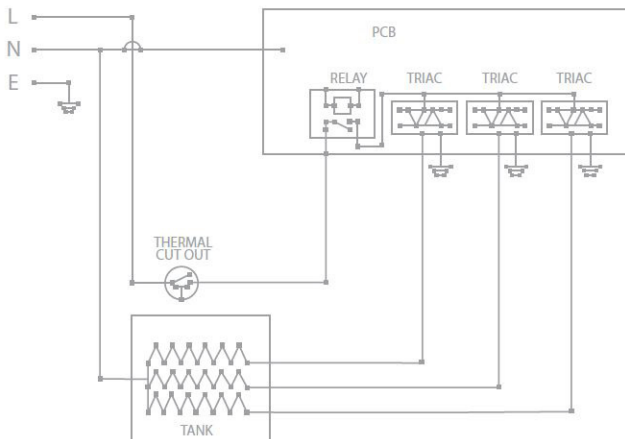
Flush supply pipes to remove any debris before connecting the appliance to the water supply.

- Make the plumbing connections as indicated on the front cover of the appliance:
  - Blue/ Inlet (cold mains)
  - Red/ Outlet (hot tap/ outlet)
- It is strongly recommended that a service valve be fitted close to the appliance on the cold feed, this will aid future maintenance.
- The inlet is the left hand pipe and the outlet the right, when viewed from the front. The supplied gauze should be fitted into the inlet side of the appliance.
- The enclosed spray head/ flow limiter attachment should be installed into the outlet of the hot tap to ensure best performance of the appliance.
- Turn on the cold mains feed and draw water through the appliance for several minutes by opening the hot outlet. Ensure a smooth flow of water from the outlet to confirm all air is purged from the system before closing the tap and carefully inspecting all connections to ensure water tightness. This step is required every time the appliance has been drained for any reason, such as routine maintenance.

### 3. Electrical Connection

-  Do not commence electrical installation before completing all stages of the plumbing installation.
-  If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
-  The appliance must be permanently connected to the electrical supply through an appropriately rated isolating switch with a separation in all poles.
-  Only connect the appliance to an electrical supply that meets the specification detailed on the rating label.
-  The appliance must be earthed.
  - Electrical supply should be capable of isolation via a double poled switch.
  - The appliance must be earthed.
  - Isolate electric and water supply before electrical installation.
  - Refer to the ratings label on the appliance to ensure correct specification of installation.

#### Wiring Diagram



## 4. Operation

- Once installed and connected to the electrical supply the appliance is ready for use.
- Turn on the appliance using the power on/ off button.
- On first installation the temperature setting will default to 38°C. To adjust this press the + / - buttons until the desired maximum target temperature is displayed.
- The heater will automatically begin heating when it detects a flow of water through it (min 2.5 l/m).
- Open the outlet valve and check the display, the temperature display will flash if the set temperature cannot be reached. It may be possible to reduce the flow rate in order to achieve the set temperature, but it must have a minimum flow of 2.5 l/m in order to initiate the heating element.
- Due to the nature of instantaneous heaters, water is only heated as it passes through the tank. Because the maximum power of the appliance is fixed there is a limit to the rate at which hot water can be delivered. The higher the flow of water, the lower the potential temperature uplift.
- The appliance incorporates intelligent control and will ensure the maximum temperature setting is not exceeded regardless of a drop in flow or increase in incoming water temperature.
- The appliance has memory recall, it will revert to its previous operational state following a power interruption.

## 5. Cleaning and Maintenance



Never remove the cover of the appliance without first isolating from the electrical power supply.



The appliance should only be installed and maintained by a competent person in accordance with any local electrical and plumbing regulations.



Do not use abrasive chemicals or cloths to clean this appliance.



Isolate the appliance from the electrical and plumbing supply before performing any maintenance task.



The appliance should be drained if it will be switched off or unattended for any length of time, particularly during the colder months of the year where the possibility of freezing temperatures exists.



Ensure any future maintenance or modifications to the plumbing system also complies with the guidelines in these instructions.



Keep records of maintenance and ensure any future occupier of the building is fully aware of the content of these instructions.

- Visually inspect the appliance and its immediate surroundings regularly for any signs of water escape that might indicate the product may be nearing the end of its natural life.
- Use a soft damp cloth when cleaning, avoid excessive use of liquids.
- Check outlet of any tap connected to the heater at regular intervals and remove any build up of scale that might obstruct the flow rate of water through the appliance.



## 6. Specification

Model	IN44T	IN60T
Power	4.4 kW	6.0 kW
Voltage	230 V	230 V
Rated current	19 A	26 A
Frequency	50 Hz	50 Hz
Min operating flow rate	2.5 l/ m	2.5 l/m
Min working pressure	0.1 MPa (1 bar)	0.1 MPa (1 bar)
Max working pressure	0.75 MPa (7.5 bar)	0.75 MPa (7.5 bar)
Maximum incoming water supply temperature	48 °C	48 °C
Required water restivity	≥1300 Ωcm	≥1300 Ωcm
Water connection inlet/ outlet	1/2" BSP	1/2" BSP
IP rating	IPX4	IPX4
Thermal cutout temperature	80 °C	80 °C
Dimensions (h x w x d)	140 x 190 x 80 mm	140 x 190 x 80 mm
Weight empty	1.6 kg	1.6 kg
Approvals	CE, UKCA, WRAS	CE, UKCA, WRAS

## 7. Temperature Performance

### Temperature/ Flow Rate

Maximum temperature increase from ambient incoming water supply temperature at a flow rate of:

Flow rate (l/m)	IN44T	IN60T
2.5	25°C	34°C
3.0	21°C	28.5°C
4.0	16°C	21°C
5.0	13°C	17°C

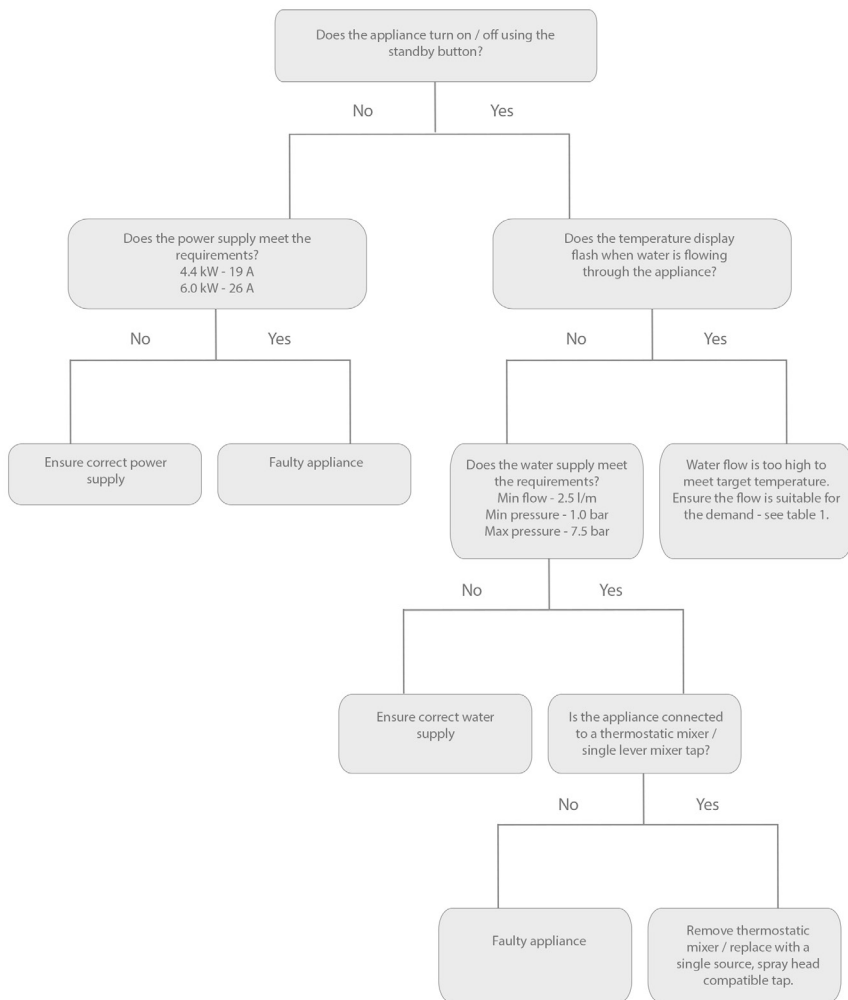
Table 1

### Examples

Maximum water temperature

Incoming water temperature	Flow rate	IN44T	IN60T
13 °C - Winter	2.5 l/m	38 °C	47°C
17 °C - Summer	2.5 l/m	42 °C	51°C

## 8. Troubleshooting



If problems persist contact Hyco Technical Department on 01924 225200.

## 9. Guarantee and Service Policy

This product is guaranteed against faulty materials and manufacture for a period of one year from the date of purchase. Hyco will in its sole discretion replace, repair or refund any faulty unit. Incorrect installation and failure to follow correct operating instructions are excluded. Consequential costs such as labour charges or damage to surroundings are expressly excluded.

## 10. Contact Us

If you experience a problem with this product you should first contact our customer service department on 01924 225 200 before taking any further action. Experience has shown that issues can often be resolved without the need to return or uninstall the product.



INFORMATION FOR CORRECT DISPOSAL OF THE PRODUCT IN ACCORDANCE WITH THE EUROPEAN DIRECTIVE 2012/19/EU.

At the end of its working life this equipment must not be disposed of as household waste. It must be taken to a local authority waste collection centre or to a dealer providing this service. Disposing of electrical and electronic equipment separately enables its components to be recovered and recycled to obtain significant savings in energy and resources. In order to underline the duty to dispose of this equipment separately, the product is marked with a crossed out dustbin.

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